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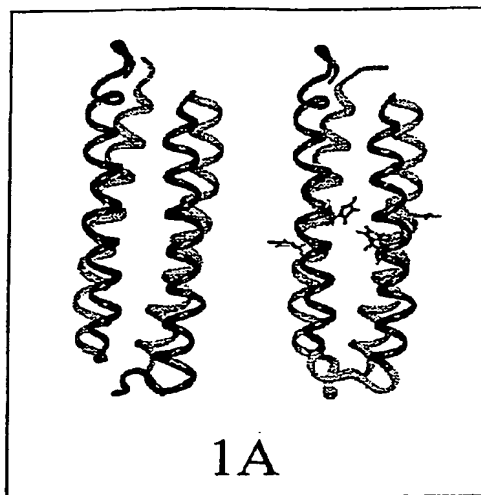
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(54) Title: ENGINEERING REDOX PROTEINS



(57) Abstract: The protein of this invention comprises a 4- α -helix bundle motif formed from the α -helices of rop (repressor of primer) and a redox centre. In this invention the redox centre is preferably haem and the iron is preferably coordinated to the α -helices of the rop structure via histidine residues. Such a protein is very stable and has the same specific activities as natural redox proteins with increased stability in the interaction with electrode surfaces. Also provided by this invention is a method of engineering proteins to develop redox proteins from structures which previously had no redox functions.

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